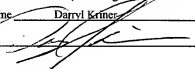


IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	)	Examiner: To Be Assigned
	)	
DAHIYAT, <i>et al.</i>	)	Group Art Unit:
	)	
Serial No.: To Be Assigned	)	<u>CERTIFICATE OF MAILING</u>
	)	"EXPRESS MAIL LABEL NO. <u>EL 659498454US</u>
Filed: HEREWITH	)	DATE OF DEPOSIT <u>January 25, 2002</u>
	)	I hereby certify that this paper or fee is being deposited with the
For: <i>APPARATUS AND METHOD FOR</i>	)	United States Postal Service "Express Mail Post Office to
<i>AUTOMATED PROTEIN DESIGN</i>	)	Addressee" service under 37 C.F.R. 1.10 on the date indicated
	)	above and is addressed to: Box Patent Application, Assistant
	)	Commissioner for Patents, Washington, DC 20231.
	)	Typed Name: <u>Darryl Krimer</u>
	)	Signed: 

PRELIMINARY AMENDMENT

Assistant Commissioner of Patents  
Washington, DC 20231

Sir:

This Preliminary Amendment accompanies the filing of a continuing application under 35 U.S.C. §119(e) and/or 35 U.S.C. §120. The Commissioner is authorized to charge any addition fees which may be required, including extension fees or other relief which may be required, or credit any overpayment to Deposit Account No. 06-1300 (Our Order No. A-65353-9/RFT/RMS/RMK).

Prior to examination of the above identified application, please amend as follows:

In the Specification:

On page 1, line 2 please add the following paragraph:

--This application is a continuing application of United States Serial No. 09/714,357, filed on November 15, 2000, which is a continuing application of 09/058,459, filed on April 10, 1998, which claims the benefit of the filing date of United States Serial Nos. 60/043,464, filed April 11, 1997, 60/054,678, filed August 4, 1997, and 60/061, filed October 3, 1997.-

In the Claims:

Please cancel claim 1 without prejudice or disclaimer.

Please add the following new claims:

- 28. A method executed by a computer under the control of a program, said computer including a memory for storing said program, said method comprising the steps of:
- (A) receiving a protein backbone structure;
  - (B) establishing a group of potential rotamers for each of said variable residue positions wherein at least one variable residue position has rotamers from at least two different amino acid side chains; and
  - (C) analyzing the interaction of each of said rotamers with all or part of the remainder of said protein backbone structure to generate a set of optimized protein sequences, wherein said analyzing step includes a forcefield calculation.
29. A method executed by a computer under the control of a program, said computer including a memory for storing said program, said method comprising the steps of:
- (A) receiving a protein backbone structure;
  - (B) establishing a group of potential rotamers for each of said variable residue positions wherein at least one variable residue position has rotamers from at least two different amino acid side chains; and
  - (C) analyzing the interaction of either or both of :
    - i) each of said rotamers with all or part of the remainder of said protein backbone structure; and
    - ii) each of said rotamers with all or part of the remainder of the rotamers for each amino acid at each position of said protein; to generate a set of optimized protein sequences, wherein said analyzing step includes a forcefield calculation.
30. A method executed by a computer under the control of a program, said computer including a memory for storing said program, said method comprising the steps of:

- (A) receiving a protein backbone structure;
- (B) establishing a group of potential rotamers for each of said variable residue positions wherein at least one variable residue position has rotamers from at least two different amino acid side chains; and
- (C) analyzing the interaction of either or both of:
  - i) each of said rotamers with all or part of the remainder of said protein backbone structure; and
  - ii) each of said rotamers with all or part of the remainder of the rotamers for each amino acid at each position of said protein;to generate a set of optimized protein sequences; and
- (D) identifying residues in at least one of said optimized protein sequences that differ from the starting backbone.

31. A method executed by a computer under the control of a program, said computer including a memory for storing said program, said method comprising the steps of:

- (A) receiving a protein backbone structure;
- (B) establishing a group of potential rotamers for each of said variable residue positions wherein at least one variable residue position has rotamers from at least two different amino acid side chains; and
- (C) analyzing the interaction of either or both of:
  - i) each of said rotamers with all or part of the remainder of said protein backbone structure; and
  - ii) each of said rotamers with all or part of the remainder of the rotamers for each amino acid at each position of said protein;to generate a set of optimized protein sequences, wherein said analyzing step includes a forcefield calculation; and
- (D) identifying residues in at least one of said optimized protein sequences that differ from the starting backbone.

32. A method executed by a computer under the control of a program, said computer including a memory for storing said program, said method comprising the steps of:

- (A) receiving a protein backbone structure with variable residue positions;
- (B) establishing a group of potential rotamers for each of said variable residue positions, wherein at least one variable residue position has rotamers from at least two different amino acid side chains;
- (C) analyzing the interaction of each of said rotamers with all or part of the remainder of said protein backbone structure to generate a set of optimized protein sequences, wherein said analyzing step includes a Dead-End Elimination (DEE) computation; and
- (D) identifying residues in at least one of said optimized protein sequences that differ from the starting backbone.--

#### REMARKS

Claim 1 has been cancelled. Support for new claims 28-32 is found in the specification at page 9, lines 10-17, and through out the examples. See for example, page 37, lines 19-20; page 39, lines 15-20; and page 44, line 15.

Attached hereto is a marked-up version of the changes made to the claims by the "Restriction and Amendment". The attached page is captioned **"Version with markings to show changes made."**

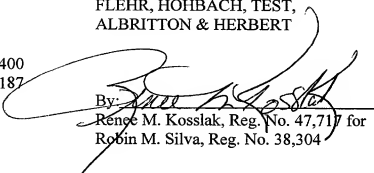
Please direct any calls in connection with this application to the undersigned at (415) 781-1989.

Dated: 1/25/02

Respectfully submitted,

FLEHR, HOHBACH, TEST,  
ALBRITTON & HERBERT

Four Embarcadero Center - Suite 3400  
San Francisco, California 94111-4187  
Tel.: (415) 781-1989  
Fax: (415) 398-3249  
1073327.RMC

By:   
Rence M. Kossiak, Reg. No. 47,717 for  
Robin M. Silva, Reg. No. 38,304

**"VERSION WITH MARKINGS TO SHOW CHANGES MADE"**

**In the Specification:**

The paragraph beginning at line 2 of page 1 has amended as follows:

This application is a continuing application of United States Serial No. 09/714,357, filed on November 15, 2000, which is a continuing application of 09/058,459, filed on April 10, 1998, which claims the benefit of the filing date of United States Serial Nos. [U.S.S.N.] 60/043,464, filed April 11, 1997, 60/054,678, filed August 4, 1997, and 60/061, filed October 3, 1997.

**In the Claims:**

Claim 1 has been cancelled.